

Supplementary material

Appendix 1.

Table A1. Spearman's correlation coefficient among all explanatory variables of the Ionian Islands. The independent variables finally entering the statistical analyses are in bold. Abbreviations: *A*, area (km²); *E*, maximum elevation (m); *D_m*, shortest distance from the nearest mainland (km); *D_i*, shortest distance to the nearest island (km); *G*, number of geological substrates; *HD*, human population density (people/km²); *T*, mean annual temperature (°C*10) and *P*, mean annual precipitation (mm).

| | <i>A</i> | <i>E</i> | <i>D_m</i> | <i>D_i</i> | <i>G</i> | <i>HD</i> | <i>T</i> | <i>P</i> |
|----------------------|----------|----------|----------------------|----------------------|----------|-----------|----------|----------|
| <i>A</i> | – | | | | | | | |
| <i>E</i> | 0.904 | – | | | | | | |
| <i>D_m</i> | 0.029 | -0.070 | – | | | | | |
| <i>D_i</i> | -0.446 | -0.430 | -0.201 | – | | | | |
| <i>G</i> | 0.922 | 0.850 | 0.101 | -0.577 | – | | | |
| <i>HD</i> | 0.467 | 0.348 | 0.186 | -0.309 | 0.407 | – | | |
| <i>T</i> | -0.664 | -0.637 | -0.311 | 0.590 | -0.635 | -0.627 | – | |
| <i>P</i> | 0.272 | 0.108 | 0.465 | -0.494 | 0.225 | 0.714 | -0.740 | – |

Table A2. The results of simple regressions of the ISAR power function models for N and TE with A, E, D_m, D_i, G, HD, T and P, as well as for IoE with A for the Ionian Islands. The *c* parameter of TE ISAR models were affected by the addition of a constant (+1) to the original values, as needed for the log₁₀-transformation. Only statistically significant variables are presented. *, *P*<0.05; **, *P*<0.005; ***, *P*<0.001. Abbreviations as in Table S1.

| Simple Regressions | R ² _{adj} |
|--|-------------------------------|
| logN = 2.15 + 0.37 logA | 0.93*** |
| logN = 0.71 + 0.76 logE | 0.75*** |
| logN = 3.34 – 0.70 logD _i | 0.40** |
| logN = 2.31 + 0.74 logG | 0.84*** |
| logN = 2.37 + 0.23 logHD | 0.36** |
| logN = 37.75 – 15.78 logT | 0.53*** |
| logN = -12.79 + 5.14 logP | 0.19* |
| logTE = 0.15 + 0.59 logA | 0.83*** |
| logTE = -2.34 + 1.29 logE | 0.75*** |
| logTE = 2.01 – 1.07 logD _i | 0.30* |
| logTE = 0.39 + 1.28 logG | 0.85*** |
| logTE = 55.93 – 24.71 logT | 0.44** |
| logIoE = 0.05 + 0.39 logA | 0.82*** |